VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM
(Deemed to be University)
BASLP DEGREE EXAMINATION - December 2019
First Semester
ELECTRONICS AND ACOUSTICS

Three Hours   Maximum: 100 marks

SECTION - A

I. Fill in the blanks :   **(6x1=6)**

1. _____ is the branch of science that deals with the study of flow and control of electrons and their behavior and effects in various medium.
2. The basic principle behind working of transformer is _____.
3. _____ is given by the formula m/s2.
4. A _____ microphone is sensitive to sounds from only one direction.
5. The _____ holds the coil of the loudspeaker in position, but allows it to move freely back and forth.

6. _____ is a systematic approach to problem solving that is often used to find and correct issues with complex machines, electronics, computers and software systems.

II. Answer briefly :   **(8x2=16)**

7. What are microcomputers?
8. Define voltage.
9. Define amplitude.
10. Define impedance.
11. Define binary number system.
12. Define DSP.
13. Difference between pressure and velocity microphones
14. Speech synthesis

III. Answer briefly :   **(6x3=18)**

15. List any three types of display devices.
16. List any three types of transistor.
17. List the properties of sound.
18. Difference between first order and second order microphones.
19. Sabin's formula
20. Difference between analog and digital signal.

SECTION – B

IV. Write short notes on any SIX: **(6x5=30)**

21. Potentiometer and Its application in the field of speech and hearing.
22. Ohms law.
23. FFT .

(p.t.o)

24. Condenser microphone.
25. Types of B Amplifier.
26. Linear predictive analysis of speech signals.
27. Methods of speech processing .
28. Components of hearing aids.

SECTION – C

V. Answer any TWO of the following : **(2x15=30)**

29. Explain AC and DC. Describe types of power supply.
30. Write in detail about loudspeakers.
31. What are analog and digital signals? How does a digital signal processor work?
32. Explain electronic instrumentation in the field of speech and hearing sciences. Draw diagram whenever necessary.

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